



After Action Review

September 14 – 15, 2004

DL XXI Statement of Work Technical Change Control Board

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Agenda

- Review of major issues
 - Action Items
 - Status of Template
 - Discussion of upcoming TCCB
 - SCORM and LMS Impact
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Purpose of TCCB

- Analyze the impact of proposed changes on courseware
- Approve no cost or milestone delay technical change proposals to DL XXI SOW requirements
- Forward to the TPIO DL for approval all technical changes that will result in increased courseware development costs and/or milestone delays.
- Provide TPIO DL cost and milestone impacts of proposed functional requirements
- Provide statuses and feedback on all change proposals



Major Issues

- **SCORM 2004**
 - A Question of When not Whether to Adopt SCORM 2004
 - Decision of when and how to be made during abbreviated TCCB – February 05
 - Working group is assembling necessary documentation
 - February TCCB will address SCORM 2004 issues and any completed action items from Sep 04 TCCB



Major Issues

(Continued)

- **Adoption of SCORM v1.2 Business Rules and Best Practices**
 - **Courseware Required to Play on Windows and Unix LMS**
 - **Implementation of Continuous Test Model**
 - Acceptance testing of Prototype
 - Conformance testing of modules
 - Sample testing of final product
 - **Eliminate IMI Implementing Instructions**
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Action Items

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Action Items

- **ASAT Database** – verify requirement
- **End of Course Survey** – clarify requirement
- **IMI Interactivity Levels** – clarify levels
- **Licensing Agreements**
 - Check Quicktime and Shockwave. Is license needed for Direct X.?
 - Baseline Home Computer has latest plug-ins w/distribution licenses.
 - Will put on web.

Note: New plug-ins must be approved through ATSC



Action Items (Continued)

- **Operating System** - Impact of Microsoft® XP Service Pack II on courseware
- **Version Control** - Develop a versioning policy usable for both courseware under development and courseware submitted for final testing and fielding.
- **Update SCORM v1.2 Business Rules** IAW TCCB recommendations
- **Meta-Data** - Update the meta-data templates



Action Items (Continued)

- **Update SCORM Army Acceptance Criteria**
 - New continuous courseware testing model.
 - New SCORM 2004 Army Acceptance Criteria
 - **Resource Validator** – produce log files
 - **Ancillary Courseware Deliverables** - How to submit support materials (e.g., Course Map, Answer Keys, etc.)
 - **Collaboration**
 - Identify the current available collaboration capabilities
 - Provide this information as part of the ATSC web page and DLKN
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Status of SOW Template

- Currently at NRCC for legal review
 - New SOW Template will be released after NRCC review and comments incorporated
 - Target date for implementation is 2nd Qtr, 05
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Upcoming TCCB

- Tentative date 1-2 February, 2005
 - Scope
 - SCORM 2004 issues
 - Completed action items
 - Technical/Policy Working Group will report on readiness to proceed to SCORM 2004
 - New comments/issues will be addressed in a future TCCB subsequent to February
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SCORM and Learning Management System Impact

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What is SCORM?

Sharable Content Object Reference Model

- SCORM allows **learning content** from any vendor to play in any SCORM conformant **LMS**
- SCORM **cooperative** effort between government, academia and industry
- SCORM consolidates the work of Specification and Standards Organizations (AICC, IMS, ARIADNE and IEEE's LTSC) into one unified reference model
- Viewed as separate 'books' gathered together into a growing library

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Parts of SCORM

Content Aggregation Model (CAM)	Specifies how <u>content</u> should <u>behave</u> once it has been launched by the LMS
Run-Time Environment" (RTE)	Specifies how you should <u>package</u> your content so that it can be imported into an <u>LMS</u> . This involves creating XML files that an LMS can read and learn everything it needs to know about your content
Sequencing and navigation for learning objects (new in SCORM 2004)	Specifies how content may be sequenced through a set of learner-initiated or system-initiated navigation events

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Why implement SCORM?

Portability	Ability to deploy content in any SCORM conformant LMS
Reusability	Ability to search and retrieve content objects, including lessons, modules, exercises, activities, media, etc. and reuse them
Data tracking	Ability to track data about the learner and the learner's experience including scores, time, comments, etc
Sequencing	Ability to combine content objects to achieve sequencing or branching strategies

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What does SCORM conformant mean?

- LMS has been developed to meet the requirements detailed in the SCORM Conformance Requirements.
- SCORM conformant content can be **deployed** in a SCORM conformant LMS.
- An author or vendor has tested the **content** or **LMS** using the Conformance Test Suite software developed by ADL

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Why move to SCORM 2004?

- Based on Industry standards (IEEE, IMS)
 - Support for more learning strategies
 - Supports TRADOC assessment requirements
 - DODI 1322.XX mandates compliance with latest version of SCORM
 - Minimum upgrade costs – ADL tools exist to upgrade v1.2 CW to 2004
 - Keeping current with technology
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Why we delayed?

- The Army is not ready TODAY, to implement SCORM 2004 because the Army needs:
 - SCORM 2004 Compliant LMS
 - Contract Documentation
 - SCORM 2004 Business Rules
 - Courseware Development/Testing Tools
 - No experience developing 2004 courseware - learning curve to implement
 - Standards still being updated
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Questions

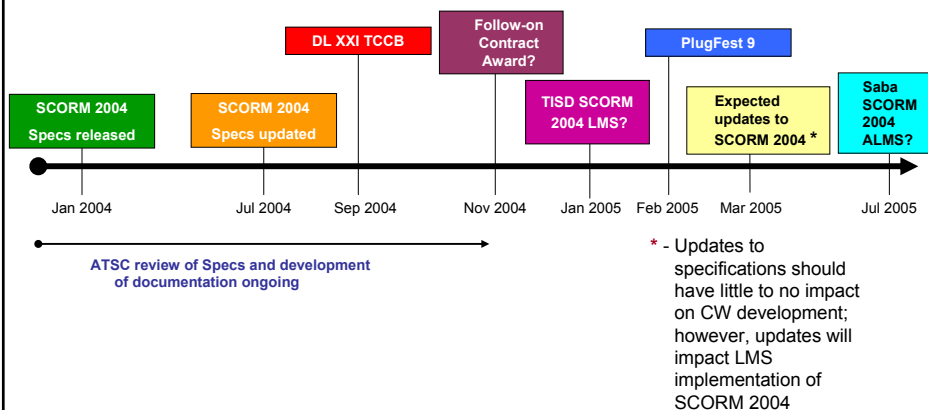


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Back ups

atssc TSS SCORM 2004 Timeline



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Known Advantages

SCORM v1.2

SCORM 2004

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|---|--|
| <ul style="list-style-type: none"> • Known specifications – have existed since Oct 2001 • ADL Documentation complete – not changing • Army documentation/ requirements exist and are complete • Army/contractor experience with specification • Tools available for development and testing • v1.2 compliant LMSs exist • Low risk to Army to continue | <ul style="list-style-type: none"> • Based on Industry standards • Supports more learning strategies • Supports TRADOC assessment requirements • DODI 1322.XX – compliance with latest version of SCORM • Minimum upgrade costs – ADL tools exist to upgrade v1.2 CW to 2004 • Keeping current with technology |
|---|--|

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Known Disadvantages

SCORM v1.2

SCORM 2004

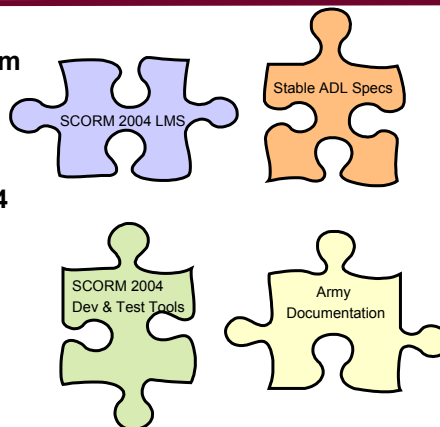
- Specifications are restrictive – cannot support all proponent CW needs
 - Fewer learning strategies supported
 - Cannot fully support TRADOC assessment requirements
 - Unclear specifications – led to implementation differences in LMSs
 - For new DLXXI Follow-On contract, bad business decision to start small businesses using SCORM v1.2 then switch to 2004. Assumes:
 - Small businesses & partners may be unfamiliar with Army implementation of SCORM v1.2
 - Contract Award in Nov 04
 - Availability of DL \$ in 1st Qtr 05
 - Small cost to migrate SCORM v1.2 CW under development to SCORM 2004
- A SCORM 2004 compliant LMS is required for development
 - Saba Development System – Mar 05
 - Update Saba CVS to SCORM 2004 – Jan 05
 - Update ILMS to SCORM 2004 – Jan 05
 - If goals NOT are attained:
 1. won't support timely implementation of new CW testing model
 2. affects development support for contractors
 3. affects ability to test and accept contracted CW (new CW test model)
 - Standards still being updated
 - Army documentation incomplete
 - No experience developing 2004
 - Saba will not have the production ALMS as SCORM 2004 compliant until at least Jul 2005

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TCCB Working Group Recommendation

- Stay with SCORM v1.2 for short term
- Continue development of Army Documentation/Best Practices on SCORM 2004
- TCCB re-visit move to SCORM 2004 in 4-6 months
 - LMS availability
 - Army documentation
 - Development & Test Tools



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SCORM 2004 Implementation Options

- Option 1 - SCORM 2004 Run-time Environment and Content Aggregation Model
 - Keeps functionality currently available with SCORM v1.2; puts CW in SCORM 2004 format
- Option 2 - Run-time Environment with Simple Navigation/No Objectives
 - some simple sequencing commands are added to the manifest ("Flow", "Roll-up" "Choice", etc.)
- Option 3 – Full SCORM 2004 – Sequencing with Objectives and Objective status in Run-Time

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SCORM 2004 Implementation Recommendation

SCORM 2004 Implementation Recommendation – Start with Option 2

Fewer changes to current Army development process

- CW can be developed with SCORM v1.2 tools and then converted to SCORM 2004
- Good SCORM 2004 Content Packaging
- Some sequencing supported
- Based on Industry IEEE standards

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